

# Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement

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For Sun Blade 6000 and  
Sun Blade 6048 Modular Systems



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# Preface

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The *Sun Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for Sun Blade 6000 and 6048 Modular System* contains information about Integrated Lights Out Manager (ILOM) 3.0 that is specific to the Sun Blade™ 6000 modular system.

For a complete discussion of ILOM 3.0 and its capabilities along with user procedures, see the ILOM 3.0 documentation collection at:

<http://docs.sun.com/app/docs/coll/ilom3.0>

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## Related Documentation

The document set for the Sun Blade 6000 modular system is described in the *Where To Find Sun Blade 6000 Modular System Documentation* sheet that is packed with your system. You can also find the documentation at

<http://docs.sun.com/app/docs/prod/blade.6000mod>

Translated versions of some of these documents are available at

<http://docs.sun.com>. Select a language from the drop-down list and navigate to r document collection using the Product category link. Available translations include French, Simplified Chinese, Traditional Chinese, Korean, and Japanese.

English documentation is revised more frequently and might be more up-to-date than the translated documentation. For all Sun documentation, go to

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- Documentation <http://docs.sun.com/>
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*Sun Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for Sun Blade 6000 and 6048 Modular System*, part number 820-7603-12.

# Introduction

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This supplement provides platform-specific information related to ILOM 3.0 running on the Sun Blade 6000 or Sun Blade 6048 modular system CMM.

The following topics are covered in this chapter:

- “CMM ILOM Document Overview” on page 1
- “ILOM 3.x New Features List” on page 2
- “Key Updates for the CMM ILOM 3.x” on page 3

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## CMM ILOM Document Overview

This document is a supplement that contains information on ILOM updates specific to the Sun Blade 6000 and Sun Blade 6048 modular system CMM ILOM 3.x. This document also provides information on SNMP traps, PET traps, and ILOM sensors.

For information on CMM ILOM administration, see *Oracle Lights Out Manager (ILOM) CMM Administration Guide*.

For more detailed information on setting up and using the ILOM 3.x, refer to the documentation in the ILOM 3.0 Documentation Collection at:

<http://docs.sun.com/app/docs/coll/ilom3.0>

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**Note** – The term blade module is used to refer to a module that could be either a server module or a storage module.

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# ILOM 3.x New Features List

ILOM 3.x includes many new features and functions that were not available in ILOM 2.x, including improved security, improved usability, and easier integration into your data center environment ILOM.

[TABLE 1-1](#) lists new features for ILOM 3.0. These features are described more fully in the ILOM 3.0 Documentation Collection.

**TABLE 1-1** ILOM 3.0 New Features

| Category                         | Feature   |
|----------------------------------|---|
| <b>General Functionality</b>     |   |
|                                  | DNS support   |
|                                  | Timezone support  |
|                                  | Configuration backup and restore  |
|                                  | Restore to factory defaults   |
|                                  | Enhanced LDAP and LDAP/SSL support  |
|                                  | Power management capabilities   |
|                                  | Ability to generate new SSH keys  |
| <b>Scalability and Usability</b> |   |
|                                  | User-configurable filtering of hardware monitoring information in CLI and web interface         |
|                                  | Use host name to access other services by name, such as LDAP, Active Directory, LDAP/SSL        |
| <b>Security</b>                  |   |
|                                  | More granular user roles  |
|                                  | Predefined <code>root</code> and <code>default</code> accounts                                  |
|                                  | User SSH key authentication   |
|                                  | Ability to disable the network management port when you are using only the serial port          |
|                                  | Ability to disable individual services, such as IPMI, SSH, and KVMS, so that the port is closed |
| <b>Serviceability</b>            |   |
|                                  | Data collection utility to diagnose system problems   |



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# Key Updates for the CMM ILOM 3.x

Most updates for ILOM 3.x are described in the *Sun Integrated Lights Out Manager (ILOM) 3.0 Feature Updates and Release Notes*.

The following table lists additional key updates that are specific to the CMM ILOM 3.x:

| Link to Update Information  | Introduced in ILOM 3.x Version |
|---|--------------------------------|
| <a href="#">“Changes in Power Allocated to the Blade Modules” on page 3</a> | 3.0.3                          |
| <a href="#">“System Fan Speed Control Improvements” on page 4</a>           | 3.0.3                          |
| <a href="#">“Force Power Supply Fans to Low Speed” on page 4</a>            | 3.0.6.11                       |
| <a href="#">“Light Load Efficiency Mode (LLEM)” on page 4</a>               | 3.0.6.11                       |
| <a href="#">“Power Management Disable Feature Available” on page 4</a>      | 3.0.6.11.c                     |
| <a href="#">“Changing the Blade SP CLI Prompt” on page 5</a>                | 3.0.10                         |
| <a href="#">“Component Firmware Update” on page 5</a>                       | 3.0.10                         |
| <a href="#">“Sun Blade Zone Manager” on page 5</a>                          | 3.0.10                         |

## Changes in Power Allocated to the Blade Modules

There is a big change in ILOM 3.0 power allocation to the blade modules. In ILOM 2.0, a blade module determines if there is enough Permitted Power for all blade modules to power on; if there is not enough power, the blade module does not power on. For a rack with many high-powered blade modules, this results in no blade modules powering on.

In ILOM 3.0 (with ILOM 3.0 on both the CMM and on the blade modules), the blade module is allocated 0 Watts when it is powered off. When a blade module wants to power on, it contacts the CMM and requests some amount of power to be allocated to the slot. The CMM then allocates power to the slot and allows the blade module to power on. When a blade module powers off, it releases the power back to the CMM.

As a result, even if you have a rack full of high-powered blade modules, you can still power on some subset of blade modules. Once all permitted power is used up, you cannot power on any more blade modules until a running blade module is powered off. But once you power off one blade module, you’ll be able to power on another blade module.

# System Fan Speed Control Improvements

There are some fan speed control improvements in ILOM 3.0 for CMM, when ILOM 3.0 is running on both the CMM and blade modules. In ILOM 2.0, the CMM sets the fan speed based on ambient temperature. In ILOM 3.0, the CMM uses feedback from the blade modules to determine the lowest fan speed that will maintain appropriate temperature for the blade modules.

This new fan speed control feature is only available if the CMM and all blade modules in the chassis are running ILOM 3.0.

## Force Power Supply Fans to Low Speed

A new feature in ILOM 3.0.6.11 (SW 3.1) allows you to adjust of power supply fans to low speed.

Refer to the *Oracle Integrated Lights Out Manager (ILOM) CMM Administration Guide* for information.

## Light Load Efficiency Mode (LLEM)

The Light Load Efficiency Mode (LLEM) is a new feature of CMM ILOM 3.0.6.11 that allows you to turn off individual power supply sides.

Refer to the *Oracle Integrated Lights Out Manager (ILOM) CMM Administration Guide* for information.

## Power Management Disable Feature Available

A new power management option has been added to ILOM 3.0.6.11.c (Software Version 3.1.3), which enables the user to disable power management so that blades in the chassis attempts to power on even if power allocation has been exceeded.

This procedure must only be performed under the supervision of Oracle service personnel.

Refer to the *Oracle Integrated Lights Out Manager (ILOM) CMM Administration Guide* for information on this procedure.

## Changing the Blade SP CLI Prompt

ILOM 3.0.10 (Software Version 3.2), includes an option for changing the blade SP CLI prompt through the CMM.

Refer to the *Oracle Integrated Lights Out Manager (ILOM) CMM Administration Guide* for information on this procedure.

## Component Firmware Update

In ILOM 3.0.10 (Software Version 3.2), a component firmware updated option is available through the CMM. This provides a centralized user interface for viewing the firmware version installed and initiating firmware updates on blades and NEMs installed in the chassis.

Refer to the *Oracle Integrated Lights Out Manager (ILOM) CMM Administration Guide* for information on this procedure.

## Sun Blade Zone Manager

In ILOM 3.0.10 (Software Version 3.2), the Sun Blade Zone Manager feature is available.

The Sun Blade Zone Manager enables you to assign storage devices in SAS-2 storage modules to SAS-2 enabled server blades. This feature is available only when SAS-2 server blades, storage blades, and NEMs are installed in the chassis. If the SAS-2 hardware environment is not available, the system displays the following error message:

```
The minimum set of SAS-2 hardware is not present or ready to support this operation.
```



## Sensors

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This chapter contains ILOM sensor information for both the Sun Blade 6000 and Sun Blade 6048 chassis. The information in this section is specific for ILOM 3.0.

For sensor information for previous versions of ILOM, see the *Integrated Lights Out Manager (ILOM) Administration Guide for the Sun Blade 6000 Modular System for Sun Blade 6000* and the *Sun Blade 6048 Modular System Service Manual* for the Sun Blade 6048.

This chapter contains the following sections:

- [“Types of Sensors” on page 7](#)
- [“Displaying Sensors” on page 9](#)
- [“Sensor Information” on page 10](#)

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## Types of Sensors

There are two types of CMM sensors:

- Discrete sensors display information about the CMM components.
- Threshold sensors show analog values, such as temperature readings or voltage levels.

## Discrete Sensors

Discrete sensors display a single value from a set of possible values.

Discrete sensors are displayed in the following format:

```
/PATH/TO/SENSOR
  Targets:
    $(POSSIBLE_SUB_SENSORS)
  Properties:
    type = $(SENSOR_TYPE)
    class = Discrete
    value = $(SENSOR_VALUE)
```

Where the following variables are used:

- **POSSIBLE\_SUB\_SENSORS**: A list of sensors below this sensor. Examples include fault or warning sensors. Using the `cd` command, you can navigate to the sub-sensor node.
- **SENSOR\_TYPE**: The type of sensor.
- **SENSOR\_VALUE**: The sensor value.

## Threshold Sensors

Threshold sensors display analog readings, such as temperature or voltage levels, and can display associated thresholds for that reading. These can be configured to generate system events when they exceed specified thresholds.

In general, these sensors are displayed in the following format:

```
/PATH/TO/SENSOR
  Targets:
    $(POSSIBLE_SUB_SENSORS)
  Properties:
    type = $(SENSOR_TYPE)
    class = Threshold
    value = $(SENSOR_VALUE) $(SENSOR_UNITS)
    upper_nonrecov_threshold = $(UNR_THRESH) $(SENSOR_UNITS)
    upper_critical_threshold = $(UC_THRESH) $(SENSOR_UNITS)
    upper_noncritical_threshold = $(UNC_THRESH) $(SENSOR_UNITS)
    lower_noncritical_threshold = $(LNC_THRESH) $(SENSOR_UNITS)
    lower_critical_threshold = $(LC_THRESH) $(SENSOR_UNITS)
    lower_nonrecov_threshold = $(LNR_THRESH) $(SENSOR_UNITS)
```

- **POSSIBLE\_SUB\_SENSORS**: A list of sensors below this sensor. Examples include fault or warning sensors. Use the `CD` command to navigate to the sub-sensor.

- **SENSOR\_TYPE**: The type of sensor.
- **SENSOR\_VALUE**: The near real-time analog reading from the sensor.
- **SENSOR\_UNITS**: The units describing the **SENSOR\_VALUE** reading.
- **UNR\_THRESH**, **UC\_THRESH**, **UNC\_THRESH**, **LNR\_THRESH**, **LC\_THRESH**, **LNC\_THRESH**: These values may generate a system event if the **SENSOR\_VALUE** crosses their thresholds.

If the CLI has no access to threshold values, for example if a component is not present, the corresponding sensor is displayed as “0.000”.

---

## Displaying Sensors

All sensors are located in the `/CH` namespace. To display the sensors using the CLI, separate the fields into targets and navigate using the `cd` and `show` commands.

For example, the speed for fan 0 in fan module 3 can be viewed by entering:

```
-> show /CH/FM3/F0/TACH
```

---

**Note** – If the chassis slot does not contain a server module, or if a power supply is not present, the corresponding target might not appear. For example, if slot 3 is empty, the target `BL3` might not appear.

---

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# Sensor Information

All sensors listed in this section can be accessed through the ILOM CLI or web interface by placing /CH in front of the sensor path shown here. For example, to access the NEM $n$ /PRSNT, use the path /CH/NEM $n$ /PRSNT.

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**Note** – The Reading value in column 1 of each table is used by `impitool` to represent the State shown in column 2.

---

The following sensors are described in this section:

- [“NEM Sensors” on page 10](#)
- [“Power Supply Sensors” on page 11](#)
- [“Fan Sensors” on page 16](#)
- [“Blade Module Sensors” on page 18](#)
- [“Chassis Sensors” on page 19](#)

## NEM Sensors

There are two network express module (NEM) slots available in the chassis. NEMs are numbered from 0 to 1.

NEM $n$  / PRSNT

These sensors report whether the NEMs are present.

**TABLE 2-1** NEM $n$ /PRSNT Readings

| Reading | State          | Event | Description     |
|---------|----------------|-------|-----------------|
| 0x0001  | Device Absent  | Yes   | NEM is absent.  |
| 0x0002  | Device Present | Yes   | NEM is present. |



## NEM $n$ / STATE

These sensors report the state of any multi-fabric NEMs that are installed in the chassis.

**TABLE 2-2** NEM $n$ /STATE Readings

| Reading | State       | Event | Description              |
|---------|-------------|-------|--------------------------|
| 0x0001  | Running     | Yes   | NEM is running.          |
| 0x0004  | Powered Off | Yes   | NEM is powered off.      |
| 0x0040  | Degraded    | Yes   | NEM needs to be serviced |

## NEM $n$ / ERR

These sensors report whether any multi-fabric NEMs have failed.

**TABLE 2-3** NEM $n$ /ERR Readings

| Reading | State                         | Event | Description         |
|---------|-------------------------------|-------|---------------------|
| 0x0001  | Predictive Failure Deasserted | Yes   | NEM has not failed. |
| 0x0002  | Predictive Failure Asserted   | Yes   | NEM has failed.     |

# Power Supply Sensors

There are two power supply modules in the chassis. Each power supply module contains two power supplies or “sides” for the Sun Blade 6000 chassis and three power supply sides for the Sun Blade 6048 chassis. Power supply modules are numbered from 0 to 1 and power supply sides are numbered from 0 to 1.

## PS $n$ / PRST

Reports the presence of the power supply module.

**TABLE 2-4** PS $n$ /PRST Readings

| Reading | State          | Event | Description              |
|---------|----------------|-------|--------------------------|
| 0x0001  | Device Absent  | Yes   | Power supply is absent.  |
| 0x0002  | Device Present | Yes   | Power supply is present. |

### *PSn*/IN\_POWER

These threshold sensors report the input (AC) power to the power supplies in Watts.

The power sensors are only accurate when the chassis is drawing a significant amount of power. Under low power conditions, the chassis cannot accurately measure power, so it will report "no reading". Typically, accurate power cannot be reported if the Sun Blade 6000 chassis is drawing less than 1500 Watts or if the Sun Blade 6048 chassis is drawing less than 2200 Watts.

### *PSn*/OUT\_POWER

These threshold sensors report the output (DC) power from the power supplies in Watts.

The power sensors are only accurate when the chassis is drawing a significant amount of power. Under low power conditions, the chassis cannot accurately measure power, so it will report "no reading". Typically, accurate power cannot be reported if the Sun Blade 6000 chassis is drawing less than 1500 Watts or if the Sun Blade 6048 chassis is drawing less than 2200 Watts.

### *PSn*/T\_AMB

These threshold sensors report the ambient temperature of the power supply modules.

### *PSn*/V\_12V

These threshold sensors report the power supply module 12V voltage reading.

### *PSn*/V\_3V3

These threshold sensors report the power supply module 3\_3V voltage reading.

### *PSn*/I\_3V3

These threshold sensors report the power supply module 3\_3V current rating.

### PSn/V\_3V3\_ERR

Reports a power supply module 3\_3V sensor fault.

**TABLE 2-5** PSn/V\_3V3\_ERR Readings

| Reading | State                         | Event | Description   |
|---------|-------------------------------|-------|---|
| 0x0001  | Predictive Failure Deasserted | No    | This state indicates that a power supply 3_3V fault has not occurred. |
| 0x0002  | Predictive Failure Asserted   | Yes   | This state indicates that a power supply 3_3V fault has occurred.     |

### PSn/TEMP\_WRN

Reports that ambient temperature reaches the following range: 50° to 60° C.

**TABLE 2-6** PSn/TEMP\_WRN Readings

| Reading | State                         | Event | Description  |
|---------|-------------------------------|-------|--|
| 0x0001  | Predictive Failure Deasserted | No    | This state indicates that a power supply ambient temperature has not reached the 50° to 60° C range. |
| 0x0002  | Predictive Failure Asserted   | Yes   | This state indicates that a power supply ambient temperature has reached the 50° to 60° C range.     |

### PSn/TEMP\_ERR

Reports presence of a power supply temperature error.

**TABLE 2-7** PSn/TEMP\_ERR Readings

| Reading | State                         | Event | Description  |
|---------|-------------------------------|-------|--|
| 0x0001  | Predictive Failure Deasserted | No    | This state indicates that a power supply temperature fault has not occurred. |
| 0x0002  | Predictive Failure Asserted   | Yes   | This state indicates that a power supply temperature fault has occurred.     |

## PSn / FAN\_ERR

Reports presence of a power supply fan error.

**TABLE 2-8** PSn/FAN\_ERR Readings

| Reading | State                         | Event | Description  |
|---------|-------------------------------|-------|--|
| 0x0001  | Predictive Failure Deasserted | No    | This state indicates that a power supply fan fault has not occurred. |
| 0x0002  | Predictive Failure Asserted   | Yes   | This state indicates that a power supply fan fault has occurred.     |

## PSn / FANn / TACH

These threshold sensors report the speed of the two fans in the power supply.

## PSn / Sn / V\_OUT\_OK

Reports the state of a power supply side.

**TABLE 2-9** PSn/Sn/V\_12V\_ERR Readings

| Reading | State                         | Event | Description   |
|---------|-------------------------------|-------|---|
| 0x0001  | Predictive Failure Deasserted | No    | This state indicates that a power supply side fault has not occurred. |
| 0x0002  | Predictive Failure Asserted   | Yes   | This state indicates that a power supply side fault has occurred.     |

## PSn / Sn / I\_12V

These threshold sensors report the power supply side 12V voltage reading.

### *PSn/Sn/V\_IN\_ERR*

Reports a power supply side fault.

**TABLE 2-10** *PSn/Sn/V\_12V\_ERR* Readings

| <b>Reading</b> | <b>State</b>                  | <b>Event</b> | <b>Description</b>  |
|----------------|-------------------------------|--------------|---|
| 0x0001         | Predictive Failure Deasserted | No           | This state indicates that a power supply side fault has not occurred. |
| 0x0002         | Predictive Failure Asserted   | Yes          | This state indicates that a power supply side fault has occurred.     |

### *PSn/Sn/V\_12V\_ERR*

Reports a power supply side 12V voltage sensor fault.

**TABLE 2-11** *PSn/Sn/V\_12V\_ERR* Readings

| <b>Reading</b> | <b>State</b>                  | <b>Event</b> | <b>Description</b>  |
|----------------|-------------------------------|--------------|---|
| 0x0001         | Predictive Failure Deasserted | No           | This state indicates that a power supply side 12V voltage fault has not occurred. |
| 0x0002         | Predictive Failure Asserted   | Yes          | This state indicates that a power supply side 12V voltage fault has occurred.     |

### *PSn/Sn/I\_12V\_ERR*

Reports a power supply side 12V voltage sensor fault.

**TABLE 2-12** *PSn/Sn/V\_12V\_ERR* Readings

| <b>Reading</b> | <b>State</b>                  | <b>Event</b> | <b>Description</b>  |
|----------------|-------------------------------|--------------|---|
| 0x0001         | Predictive Failure Deasserted | No           | This state indicates that a power supply side 12V voltage fault has not occurred. |
| 0x0002         | Predictive Failure Asserted   | Yes          | This state indicates that a power supply side 12V voltage fault has occurred.     |

## PSn/Sn/I\_12V\_WRN

Reports that power supply side 12V output current exceeds 240A for 100 msec.

**TABLE 2-13** PSn/Sn/I\_12V\_WRN Readings

| Reading | State                         | Event | Description  |
|---------|-------------------------------|-------|--|
| 0x0001  | Predictive Failure Deasserted | No    | This state indicates that a power supply side 12V current does not exceed 240A for 100 msec. |
| 0x0002  | Predictive Failure Asserted   | Yes   | This state indicates that a power supply side 12V current exceeds 240A for 100 msec.         |

## VPS

VPS is the virtual power sensors and reports the total power used by the chassis (typically the sum of PS0/IN\_POWER and PS1/IN\_POWER).

The power sensors are only accurate when the chassis is drawing a significant amount of power. Under low power conditions, the chassis cannot accurately measure power, so it will report "no reading". Typically, accurate power cannot be reported if the Sun Blade 6000 chassis is drawing less than 1500 Watts or if the Sun Blade 6048 chassis is drawing less than 2200 Watts.

## Fan Sensors

The Sun Blade 6000 chassis contains six fan modules and the Sun Blade 6048 chassis contains eight fan modules. Each module contains two fans. Fan modules are numbered from 0 to 5 for Sun Blade 6000 and 0 to 7 for Sun Blade 6048. Fans are numbered from 0 to 1.

## FM*n* / Fn / TACH

These sensors report individual fan speeds. All fan speed sensors are configured to generate the same events and all faults are handled in the same way. They are not monitored when the chassis is powered off.

**TABLE 2-14** FM*n*/Fn/TACH Readings

| Threshold             | Direction | Event | Description  |
|-----------------------|-----------|-------|--|
| Lower Non-Recoverable | Assert    | Yes   | Fan speed has decreased below lower non-recoverable threshold.<br>This indicates that the fan has failed or has been removed.            |
| Lower Non-Recoverable | Deassert  | Yes   | Fan speed has returned to normal from lower non-recoverable.<br>This indicates that the fan has returned to normal or has been replaced. |

## FM*n* / ERR

These sensors report fan module failure status.

**TABLE 2-15** FM*n*/ERR Readings

| Reading | State                         | Event | Description  |
|---------|-------------------------------|-------|--|
| 0x0001  | Predictive Failure Deasserted | No    | This state indicates that the fan module has not failed. |
| 0x0002  | Predictive Failure Asserted   | Yes   | This state indicates that the fan module has failed.     |

# Blade Module Sensors

The Sun Blade 6000 chassis has 10 blade slots for server or storage modules (blade modules) and blade slots are numbered from 0 to 9.

The Sun Blade 6048 chassis has 12 blade slots for server or storage modules (blade modules) and blade slots are numbered from 0 to 11.

## BL*n* / PRSNT

These sensors report whether server modules are present in the specified slots.

**TABLE 2-16** BL*n*/PRSNT Readings

| Reading | State         | Event | Description                   |
|---------|---------------|-------|-------------------------------|
| 0x0001  | Device Absent | No    | Server module is not present. |
| 0x0002  | State Present | No    | Server module is present.     |

## BL*n* / STATE

These sensors report the state of the server modules.

**TABLE 2-17** BL*n*/STATE Readings

| Reading | State     | Event | Description                       |
|---------|-----------|-------|-----------------------------------|
| 0x0001  | Running   | No    | Server module is running.         |
| 0x0004  | Power Off | No    | Server module is not powered off. |
| 0x0020  | Off Duty  | No    | Server module is ready to remove. |

## BL*n* / ERR

These sensors report whether there is a fault on the server module.

**TABLE 2-18** BL*n*/ERR Readings

| Reading | State                         | Event | Description                   |
|---------|-------------------------------|-------|-------------------------------|
| 0x0001  | Predictive Failure Asserted   | Yes   | Server module has failed.     |
| 0x0002  | Predictive Failure Deasserted | Yes   | Server module has not failed. |



## BLn/VPS

These sensors report the virtual power for the server modules. This sensor should match the /SYS/VPS sensor reading on the server module. Slots are numbered from 0 to 9 for Sun Blade 6000 and 0 to 11 for Sun Blade 6048.

This sensor is only available on some server modules, and only if the server module is running ILOM 3.0. Otherwise, BLn/VPS will report "no reading". Refer to the server module documentation to determine whether or not this sensor is available.

## Chassis Sensors

The following sensors are for the Sun Blade 6000 and Sun Blade 6048 chassis.

### HOT

This sensor reports if any blade is requesting full fan speed due to high temperature.

**TABLE 2-19** HOT Readings

| Reading | State            | Event | Description   |
|---------|------------------|-------|---|
| 0x0001  | State Deasserted | No    | This state indicates that no blade is requesting full fan speed.            |
| 0x0002  | State Asserted   | No    | This state indicates that one ore more blades is requesting full fan speed. |

### T\_AMB

T\_AMB reports ambient air temperature based on available power supply inlet air temperature readings. This sensor is for monitoring only; no threshold is defined.

## P\_OVER\_WARN

Reports power supply oversubscription state.

**TABLE 2-20** P\_OVER\_WARN Readings

| Reading | State            | Event | Description  |
|---------|------------------|-------|--|
| 0x0001  | State Deasserted | No    | Power supplies are not oversubscribed; blade modules are allowed to turn on. |
| 0x0002  | State Asserted   | No    | Power supplies are oversubscribed; some blade modules might not turn on.     |

## SNMP and PET Reference Information

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This section describes Simple Network Management Protocol (SNMP) and Platform Event Trap (PET) messages that are generated by devices being monitored by ILOM. The messages described in this section are for both Sun Blade 6000 modular system and Sun Blade 6048 modular system.

- [“SNMP Traps” on page 21](#)
- [“PET Event Messages” on page 23](#)

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### SNMP Traps

SNMP Traps are generated by the SNMP agents that are installed on the SNMP devices being managed by ILOM. ILOM receives the SNMP Traps and converts them into SNMP event messages that appear in the event log. For more information about the SNMP event messages that might be generated on your system, see the following table.

| SNMP Event   | SNMP Trap Sent                            | Sensor Name                    | Severity      | Description  |
|--|---|--------------------------------|---------------|--|
| event<br>fault.chassis.<br>device.fail               | sunHwTrapIOFault                          | /CH/NEM                        | Major         | A component in the IO subsystem is suspected of causing a fault.   |
| event<br>fault.chassis.<br>device.fail               | sunHwTrapIOFaultClear<br>ed               | /CH/NEM                        | Informational | An IO subsystem component fault has been cleared.  |
| Upper critical<br>threshold<br>exceeded              | sunHwTrapTempCritThre<br>sholdExceeded    | /CH/T_AMB<br>/CH/PSx/T_AMB     | Major         | A temperature sensor has reported that its value has gone above an upper critical threshold setting or below a lower critical threshold setting. |
| Upper critical<br>threshold no<br>longer<br>exceeded | sunHwTrapTempCritThre<br>sholdDeasserted  | /CH/T_AMB<br>/CH/PSx/T_AMB     | Informational | A temperature sensor has reported that its value has gone below an upper critical threshold setting or above a lower critical threshold setting. |
| Upper fatal<br>threshold<br>exceeded                 | sunHwTrapTempFatalThr<br>esholdExceeded   | /CH/T_AMB<br>/CH/PSx/T_AMB     | Critical      | A temperature sensor has reported that its value has gone above an upper fatal threshold setting or below a lower fatal threshold setting.       |
| Upper fatal<br>threshold no<br>longer<br>exceeded    | sunHwTrapTempFatalThr<br>esholdDeasserted | /CH/T_AMB<br>/CH/PSx/T_AMB     | Informational | A temperature sensor has reported that its value has gone below an upper fatal threshold setting or above a lower fatal threshold setting.       |
| Assert   | sunHwTrapPowerSupplyE<br>rror             | /CH/P_OVER_WARN                | Major         | A power supply sensor has detected an error.   |
| Deassert   | sunHwTrapPowerSupplyO<br>k                | /CH/P_OVER_WARN                | Informational | A power supply sensor has returned to its normal state.  |
| Assert   | sunHwTrapComponentErr<br>or               | /CH/HOT<br>/CH/PSx/Sx/V_OUT_OK | Major         | A sensor has detected an error. This generic 'component' trap is generated when the SNMP agent does not recognize the component type.            |

| SNMP Event                               | SNMP Trap Sent                            | Sensor Name                    | Severity      | Description  |
|--|---|--------------------------------|---------------|--|
| Deassert                                 | sunHwTrapComponentOk                      | /CH/HOT<br>/CH/PSx/Sx/V_OUT_OK | Informational | A sensor has returned to its normal state. This generic 'component' trap is generated when the SNMP agent does not recognize the component type. |
| Lower fatal threshold exceeded           | sunHwTrapFanSpeedFatalThresholdExceeded   | /CH/PSx/FANx/TACH              | Critical      | A fan speed sensor has reported that its value has gone above an upper fatal threshold setting or below a lower fatal threshold setting.         |
| Lower fatal threshold no longer exceeded | sunHwTrapFanSpeedFatalThresholdDeasserted | /CH/PSx/FANx/TACH              | Informational | A fan speed sensor has reported that its value has gone below an upper fatal threshold setting or above a lower fatal threshold setting.         |

## PET Event Messages

Platform Event Trap (PET) events are generated by systems with Alert Standard Format (ASF) or an IPMI baseboard management controller. The PET events provide advance warning of possible system failures. For more information about the PET event messages that might occur on your system, see the following table.

| SNMP Event  | SNMP Trap Sent                                     | Sensor Name                | Severity | Description  |
|---|--|----------------------------|----------|--|
| Temperature Upper critical threshold has been exceeded  | petTrapTemperatureUpperNonCriticalGoingHigh        | /CH/T_AMB<br>/CH/PSx/T_AMB | Major    | Temperature has increased above upper critical threshold.        |
| Temperature Upper critical threshold no longer exceeded | petTrapTemperatureUpperNonCriticalGoingLowDeassert | /CH/T_AMB<br>/CH/PSx/T_AMB | Warning  | Temperature has decreased below upper critical threshold.        |
| Temperature Lower fatal threshold has been exceeded     | petTrapTemperatureUpperNonRecoverableGoingHigh     | /CH/T_AMB<br>/CH/PSx/T_AMB | Critical | Temperature has increased above upper non-recoverable threshold. |

| SNMP Event   | SNMP Trap Sent  | Sensor Name  | Severity      | Description  |
|--|---|--|---------------|--|
| Temperature Lower fatal threshold no longer exceeded | petTrapTemperatureUpperNonRecoverableGoingLowDeassert | /CH/T_AMB<br>/CH/PSx/T_AMB   | Major         | Temperature has decreased below upper non-recoverable threshold.   |
| Temperature sensor ASSERT                            | petTrapTemperatureStateAssertedAssert                 | /CH/HOT  | Critical      | Temperature event occurred. Possible cause: CPU is too hot.  |
| Temperature sensor DEASSERT                          | petTrapTemperatureStateDeassertedAssert               | /CH/HOT  | Informational | Temperature event occurred.  |
| Entity Presence Insert                               | petTrapEntityPresenceDeviceInsertedAssert             | /CH/BLx/PRSNT<br>/CH/BLx/HDDx/PRSNT<br>/CH/BLx/FMODx/PRSNT<br>/CH/BLx/ESM/PRSNT<br>/CH/NEMx/PRSNT<br>/CH/PSx/PRSNT | Informational | A device is present or has been inserted.  |
| Entity Presence Remove                               | petTrapEntityPresenceDeviceRemovedAssert              | /CH/BLx/PRSNT<br>/CH/BLx/HDDx/PRSNT<br>/CH/BLx/FMODx/PRSNT<br>/CH/BLx/ESM/PRSNT<br>/CH/NEMx/PRSNT<br>/CH/PSx/PRSNT | Informational | A device is absent or has been removed.  |
| Module Transition to Running assert                  | petTrapModuleBoardTransitionToRunningAssert           | /CH/BLx/STATE<br>/CH/NEMx/STATE  | Informational | A device has transitioned to the normal running state. For a blade, this indicates that the host has powered on. |
| Module Transition to In Test assert                  | petTrapModuleBoardTransitionToInTestAssert            | /CH/BLx/STATE<br>/CH/NEMx/STATE  | Informational | A device is in a transitional state. (Only used for NEMs.)   |
| Module Transition to Power Off assert                | petTrapModuleBoardTransitionToPowerOffAssert          | /CH/BLx/STATE<br>/CH/NEMx/STATE  | Informational | A device has powered off.  |
| Module Transition to On Line assert                  | petTrapModuleBoardTransitionToOnLineAssert            | /CH/BLx/STATE<br>/CH/NEMx/STATE  | Informational | A device is online and ready to enter the running state. (Only used for NEMs.)                                   |
| Module Transition to Off Line assert                 | petTrapModuleBoardTransitionToOffLineAssert           | /CH/BLx/STATE<br>/CH/NEMx/STATE  | Informational | Unused.  |
| Module Transition to Off Duty assert                 | petTrapModuleBoardTransitionToOffDutyAssert           | /CH/BLx/STATE<br>/CH/NEMx/STATE  | Informational | A device is no longer in use and is ready to be removed.   |

| SNMP Event                                  | SNMP Trap Sent                                  | Sensor Name  | Severity      | Description   |
|---|---|--|---------------|---|
| Module Transition to Degraded assert        | petTrapModuleBoardTransitionToDegradedAssert    | /CH/BLx/STATE<br>/CH/NEMx/STATE                                  | Informational | A device is has entered a state of degraded operation, for example, due to a hardware fault, or an over-temperature condition that caused the device to shut itself down. |
| Module Transition to Power Save assert      | petTrapModuleBoardTransitionToPowerSaveAssert   | /CH/BLx/STATE<br>/CH/NEMx/STATE                                  | Informational | Unused.   |
| Module Install Error assert                 | petTrapModuleBoardInstallErrorAssert            | /CH/BLx/STATE<br>/CH/NEMx/STATE                                  | Informational | Unused.   |
| OEM Reserved reporting Predictive Failure   | petTrapOEMPredictiveFailureAsserted12583937     | /CH/BLx/ERR<br>/CH/BLx/ESM/ERR<br>/CH/NEMx/ERR                   | Major         | OEM predictive failure asserted.  |
| OEM Reserved Return to normal               | petTrapOEMPredictiveFailureDeasserted           | /CH/BLx/ERR<br>/CH/BLx/ESM/ERR<br>/CH/NEMx/ERR                   | Informational | OEM predictive failure deasserted.  |
| Fan reporting Predictive Failure            | petTrapFanPredictiveFailureAsserted             | /CH/FMx/ERR<br>/CH/PSx/FAN_ERR                                   | Major         | Fan Predictive Failure detected.  |
| Fan Return to normal                        | petTrapFanPredictiveFailureDeasserted           | /CH/FMx/ERR<br>/CH/PSx/FAN_ERR                                   | Informational | Fan Predictive Failure state has been cleared.  |
| Voltage reporting Predictive Failure        | petTrapVoltagePredictiveFailureAssertedAssert   | /CH/PSx/V_3V3_ERR<br>/CH/PSx/Sx/V_IN_ERR<br>/CH/PSx/Sx/V_12V_ERR | Major         | Voltage Predictive Failure detected.  |
| Voltage Return to normal                    | petTrapVoltagePredictiveFailureDeassertedAssert | /CH/PSx/V_3V3_ERR<br>/CH/PSx/Sx/V_IN_ERR<br>/CH/PSx/Sx/V_12V_ERR | Informational | Predictive failure state due to voltage event has been cleared.   |
| Temperature reporting Predictive Failure    | petTrapTemperaturePredictiveFailureAsserted     | /CH/PSx/TEMP_WRN<br>/CH/PSx/TEMP_ERR                             | Major         | System is reporting a predictive failure as a result of high temperature.   |
| Temperature Return to normal                | petTrapTemperaturePredictiveFailureDeasserted   | /CH/PSx/TEMP_WRN<br>/CH/PSx/TEMP_ERR                             | Informational | Predictive failure state due to high temperature has been cleared.  |
| Fan Lower fatal threshold has been exceeded | petTrapFanLowerNonRecoverableGoingLow           | /CH/PSx/FANx/TACH  | Critical      | Fan speed has decreased below lower non-recoverable threshold. Fan failed or removed.   |

| SNMP Event                                   | SNMP Trap Sent                                 | Sensor Name                                  | Severity      | Description  |
|--|--|--|---------------|--|
| Fan Lower fatal threshold no longer exceeded | petTrapFanLowerNonRecoverableGoingHighDeassert | /CH/PSx/FANx/TACH                            | Major         | Fan speed has increased above lower non-recoverable threshold. |
| Voltage sensor ASSERT                        | petTrapVoltageStateAssertedAssert              | /CH/PSx/Sx/V_OUT_OK                          | Informational | Voltage event occurred.  |
| Voltage sensor DEASSERT                      | petTrapVoltageStateDeassertedAssert            | /CH/PSx/Sx/V_OUT_OK                          | Informational | Voltage event occurred.  |
| Current reporting Predictive Failure         | petTrapCurrentPredictiveFailureAsserted        | /CH/PSx/Sx/I_12V_ERR<br>/CH/PSx/Sx/I_12V_WRN | Major         | Predictive Failure due to electric current conditions.         |
| Current Return to normal                     | petTrapCurrentPredictiveFailureDeasserted      | /CH/PSx/Sx/I_12V_ERR<br>/CH/PSx/Sx/I_12V_WRN | Informational | Predictive failure caused by electric current conditions.      |